

**Abstract**

[0089] The device is an optoelectronic device or transparent waveguide device that comprises a growth surface, a growth mask, an optical waveguide core mesa and a cladding layer. The growth mask is located on the semiconductor surface and defines an elongate growth window. The optical waveguide core mesa is located in the growth window and has a trapezoidal cross-sectional shape. The cladding layer covers the optical waveguide core mesa and extends over at least part of the growth mask. Such devices are fabricated by providing a wafer comprising a growth surface, growing an optical waveguide core mesa on the growth surface by micro-selective area growth at a first growth temperature and covering the optical waveguide core mesa with cladding material at a second growth temperature, lower than the first growth temperature.